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Bagshaw

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(54) **RECLINABLE SWING CHAIR**

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(52) **U.S. Cl.** **297/278**; 297/280; 5/123
(58) **Field of Search** 297/273, 276, 297/277, 278, 280, 281, 282; 5/98.3, 120, 123, 125

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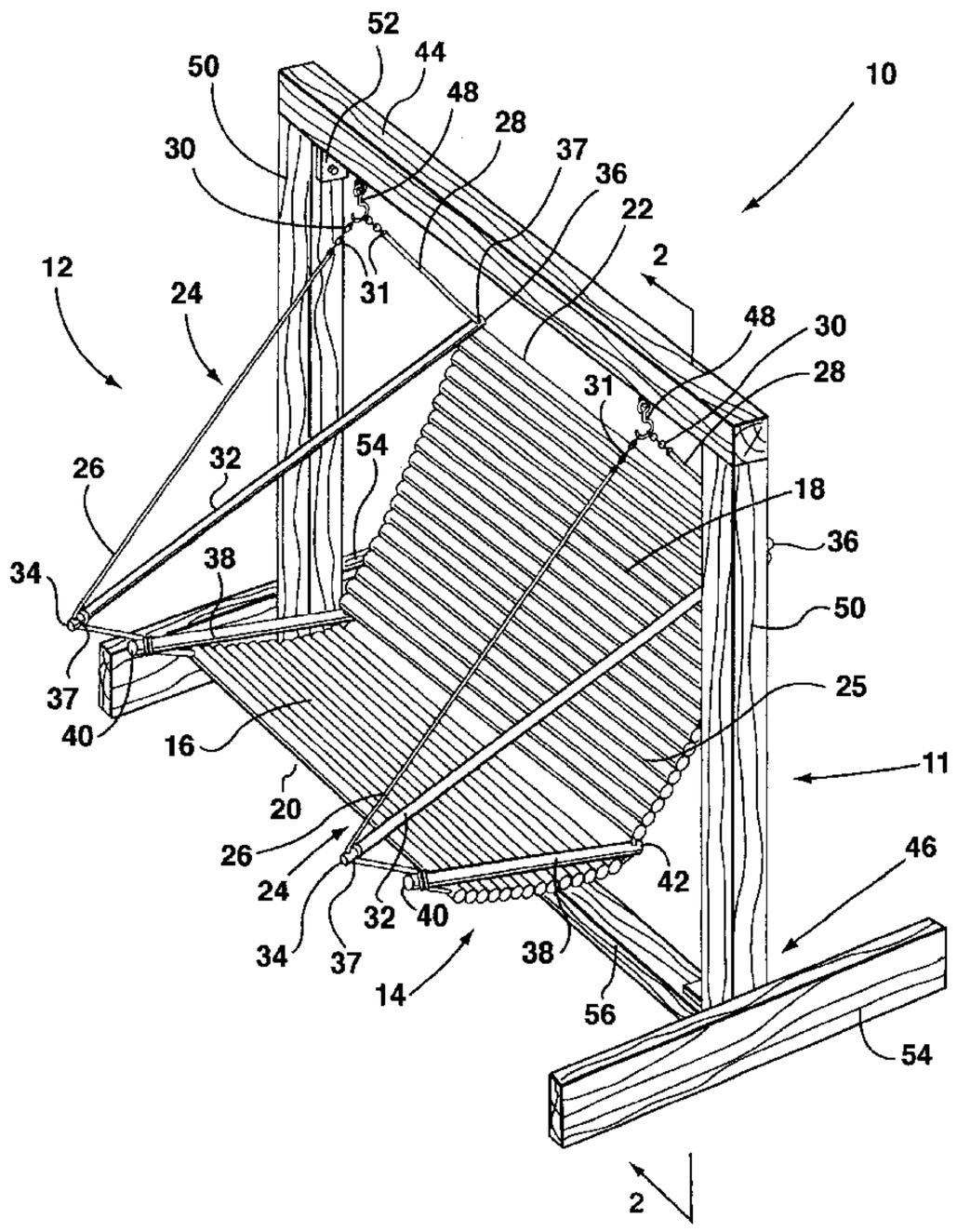
(57) **ABSTRACT**

A reclinable swing chair is provided that may be moved between a reclined and an upright position. The reclinable swing chair has a body, a pair of rope supports and a pair of adjustable arms. The reclinable swing chair is suspended from a frame. The frame has a horizontally extending supporting member and a leg assembly to support the frame. The body has a seat portion and a back rest portion. The rope supports are attached at opposite sides of the body and have front and back loop portions that converge at a suspension point to suspend the swing chair. The adjustable arms are attached to the front loop portions of the rope supports at a front end and slidingly receive the back loop portion at a back end. The back end can move along the back loop portion between a first position adjacent the back seat portion and a second position spaced from the back seat portion so that the swing chair may be moved between a reclined and an upright position.

9 Claims, 3 Drawing Sheets



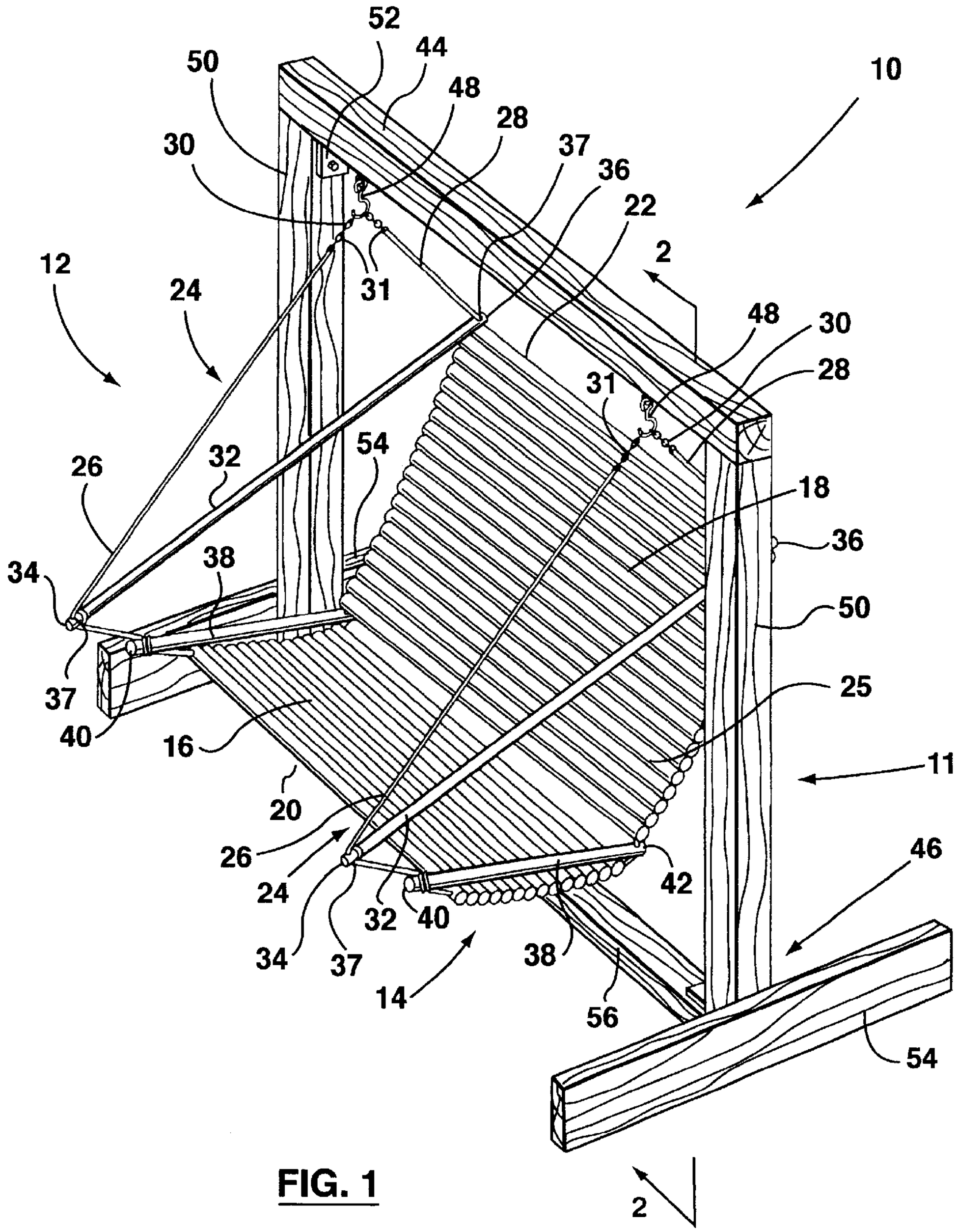

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FIG. 1

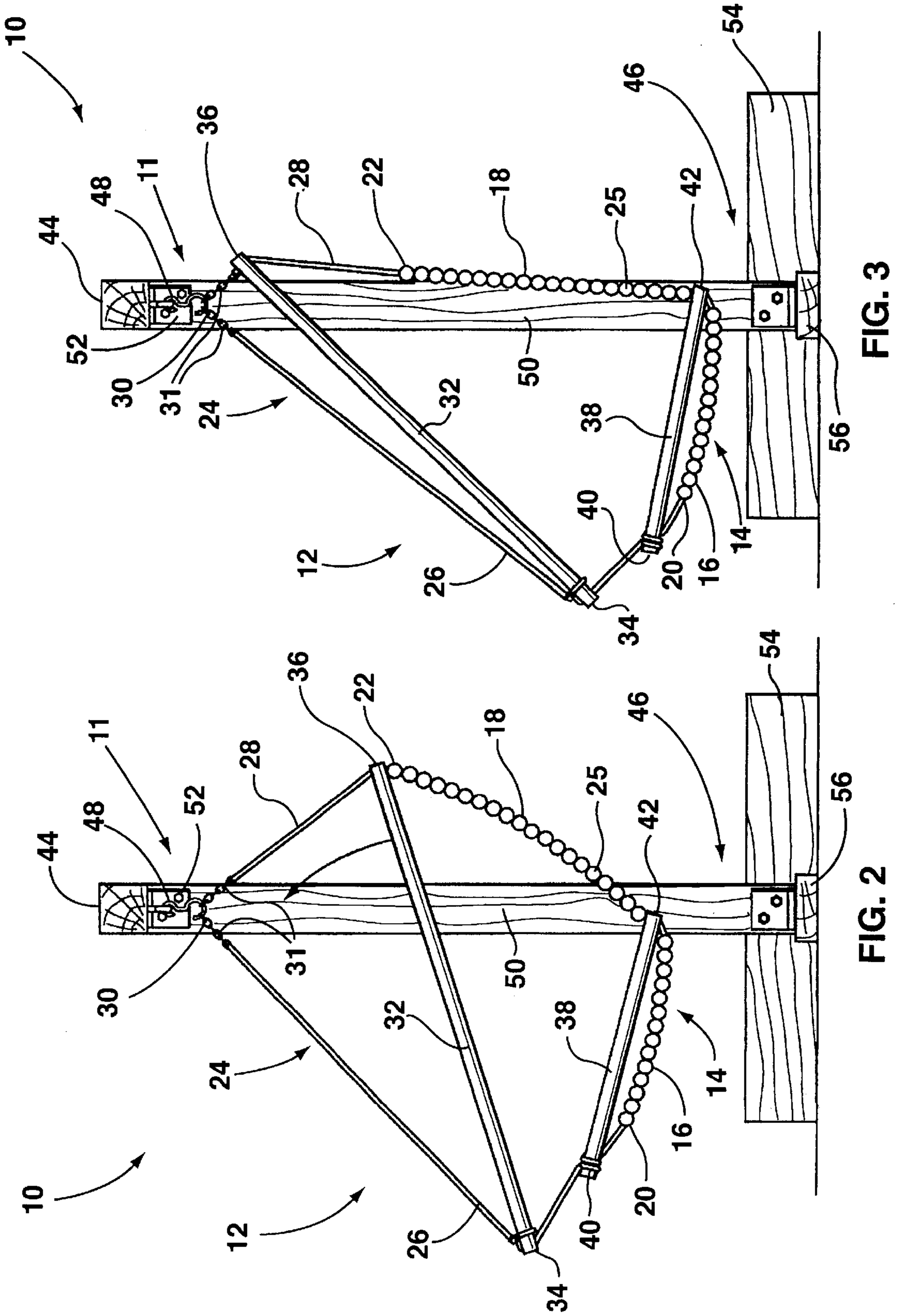
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FIG. 2

FIG. 3

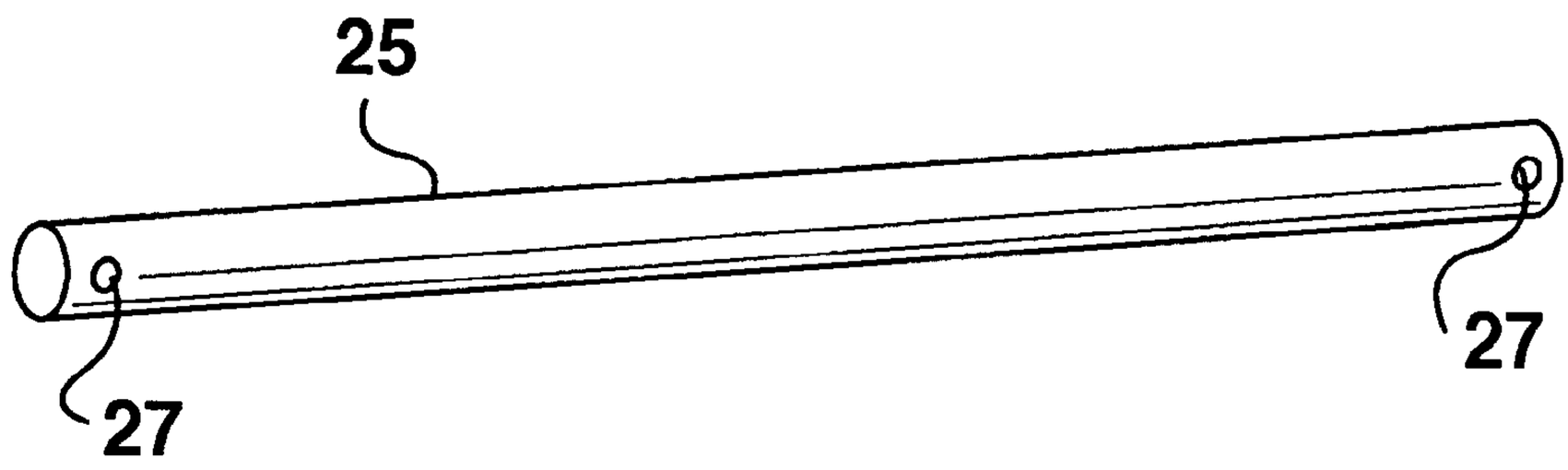

FIG. 4

RECLINABLE SWING CHAIR

FIELD OF THE INVENTION

This invention relates to swing chairs and more particularly to a reclinable swing chair with a seat portion and a back rest portion that allows angular movement between the two portions.

BACKGROUND OF THE INVENTION

Swing chairs are generally used outdoors and have a seat portion that is attached to a frame. The seat portion is generally made from one piece of material and has a seat and a back rest. The seat and the back rest may be manufactured separately and then attached together to form the seat portion.

Some swing chairs may have seats that are adjustable to allow a user to position the seat for their comfort. The adjustment mechanisms may be located in a position on the seat that may make it awkward for a user to reach and therefore easily adjust the position of the seat while seated. Some adjustments mechanisms use metal chains that contain chain links which may cause an injury to the user if they are not cautious and accidentally catch themselves in the chain when the seat is being adjusted or while it is swinging.

Stationary chairs are known that have seats made from a series of slats that are strung together on a frame. These chairs are generally rigid structures and are not designed to be suspended from a frame or similar supporting object, and therefore cannot be used as a swing.

It is therefore desirable to provide a reclinable swing chair. It is further desirable to provide a reclinable swing chair that allows a user to position the chair between an upright and a reclined position, that is safe and easily manipulated by a user.

SUMMARY OF THE INVENTION

In a broad aspect, the invention provides a reclinable swing chair that may be moved between a reclined and an upright position. The reclinable swing chair has a body, a pair of rope supports and a pair of adjustable arms. The body has a seat portion and a back rest portion. The rope supports are attached at opposite sides of the body and have front and back loop portions that converge at a suspension point to suspend the swing chair. The adjustable arms are attached to the front loop portions of the rope supports at a front end and slidingly receive the back loop portion at a back end. The back end can move along the back loop portion between a first position adjacent the back seat portion and a second position spaced from the back seat portion so that the swing chair may be moved between a reclined and an upright position.

In a preferred embodiment of the reclinable swing chair, a frame is included to suspend the swing chair. The frame includes a supporting member to which the swing chair is attached and a leg assembly that supports the frame in an upright position during use.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is better understood in reference to the drawings, and following description, in which:

FIG. **1** is an isometric view of a reclinable swing chair assembly according to a preferred embodiment of the invention, having a frame and a swing chair in a reclined position;

FIG. **2** is a partially sectional end elevation of the swing chair assembly drawn on line **2**—**2** of FIG. **1**;

FIG. **3** is a partially sectional end elevation of the swing chair assembly drawn on line **2**—**2** of FIG. **1**, with the swing chair shown in an upright position; and

FIG. **4** is an isometric view of a rung forming part of the swing chair assembly.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference is first made to FIG. **1** to describe a preferred embodiment of a reclinable swing chair assembly, in accordance with the invention, designated generally by the numeral **10**. The swing chair assembly **10** includes a frame **11** and a swing chair **12**. The swing chair **12** has a body **14** with a seat portion **16** and a back rest portion **18** that define a forward edge **20** and a rear edge **22** respectively. The body **14** is suspended by a pair of rope supports **24** that are disposed on opposite sides of the body **14** and attached to the forward edge **20** and the rear edge **22**.

It will be evident that the seat portion **16** and the back rest portion **18** will be of a similar width in order to provide an equally proportioned seat. The back rest portion **18** may have a substantially greater depth in order to provide suitable support for a person's back while seated. The body **14** can be sized to provide a swing chair in varying widths that can be suitable for one or more persons.

The seat portion **16** and the back rest portion **18** comprise a plurality of longitudinally extending rungs **25**, positioned parallel to the forward edge **20** and the rear edge **22**. Each of the rungs **25** has openings **27** (FIG. **4**) located at opposite ends for receiving the rope supports **24**. When the swing chair **12** is manufactured, the rungs **25** are threaded along the rope supports **24** by passing the rope supports **24** through the respective openings **27**.

The rope supports **24** define a front loop portion **26** and a back loop portion **28** that converge at a suspension point **30** to suspend the swing chair **12**. The back loop portion **28** extends from the suspension point **30** past the rear edge **22** and through the rungs **25** located in the back rest portion **18**. In a similar manner, the front loop portion **26** extends from the suspension point **30** past the forward edge **20** and through the rungs **25** located in the seat portion **16** to meet the back loop portion **28** at the back rest portion **18**. The rope supports **24** are each made from a continuous integral length of rope, with a few chain links **31** attached at each end, that meet at the suspension point **30**.

A pair of adjustable arms **32** are provided for moving the swing chair **12** between a reclined and an upright position, as shown in FIGS. **2** and **3**. Each arm **32** has a front end **34** and a back end **36**. The arms **32** are solid cylindrical pieces of wood with openings **37** located at least at the back end **36**, and preferably also at the front end **34**. The front end **34** is fixedly attached to the front loop portion **26** and the back end **36** slidingly receives the back loop portion **28** through the openings **37** for moving the arms **32** along the back loop portion **28**.

As a result, the arms **32** can be moved between a first and a second position. In the first position, the back end **36** is located adjacent the rear edge **22** of the back rest portion **18** and forces the front loop portion **26** away from the back loop portion **28** which in turn positions the back rest portion **18** in a reclined position, as shown in FIG. **2**. In the second position, the back end **36** is located spaced from the rear edge **22**, towards the suspension point **30** in the direction of arrow A on FIG. **2**. Movement of the arms **32** to the second

position will simultaneously move the back loop portion **28** towards the front loop portion **26**, bringing the back rest portion **18** to a substantially upright position, as shown in FIG. **3**.

To provide further rigidity to the swing chair **12**, a pair of braces **38** may also be included in the body **14**. Similar to the arms **32**, the braces **38** also have a front end **40**, and a back end **42**. The front end **40** is attached to the front loop portion **26** between the arms **32** and the forward edge **20**. The back end **42** is attached to the front loop portion **26** between the seat portion **16** and the back rest portion **18** and is restricted in movement by the seat portion **16** and the back rest portion **18**.

The swing chair **12** is suspended from a lumber frame **11**. The frame **11** has a horizontally extending supporting member **44** maintained in a position spaced from the ground, or other suitable supporting surface, by a leg assembly **46**. The supporting member **44** is sized to have a greater width than the body **14**. The swing chair **12** is attached to the supporting member **44** at a connection means in the form of a pair of hooks **48** located on the supporting member **44** and screwed into a bottom facing edge so as to be spaced at a distance corresponding to the width of the body **14**. The location of the connection means **48** must be accessible to allow the attachment and suspension of the swing chair **12**.

As mentioned previously, the leg assembly **46** supports the supporting member **44** and maintains it in spaced relation from the ground when the swing chair assembly **10** is in use. In its preferred form, leg assembly **46** has a pair of upright posts **50** perpendicularly extending from the supporting member **44** at each end towards the ground or other supporting surface when the swing chair assembly **10** is in use. The posts **50** are coupled to the supporting member using a pair of angle irons **52**. To provide support, a pair of horizontally spaced parallel feet **54** are attached at the opposite ends of the posts **50** from the supporting member **44**. The feet **54** are located perpendicularly to the end of the posts **50** and extend beyond the width of the posts **50**. The feet **54** can be detached from the frame **11** when the structure is stored to reduce the amount of space required for storage. A beam **56** located near the ground and in parallel relation to the supporting member **44** at the opposite end of the posts **50**, and attached to the posts **50** at opposing ends, provides additional support to the frame **11**.

In use, in its preferred form, the swing chair assembly **10** is assembled as shown in FIG. **1**. The frame **11** is positioned to be able to support the swing chair **12**, with leg assembly **46** supporting the supporting member **44** in an upright position. The hooks **48** are located on the downwardly facing surface of the supporting member **44** and the swing chair **12** is suspended from the frame **11** by attaching a selected one of the chain links **31** forming part of the rope supports **24** to a respective hook **48**. The swing chair **12** is now operable to suspend and to swing.

When the back end **36** of the arms **32** is located adjacent the rear edge **22**, the swing chair **12** is in a reclined position, as shown in FIG. **2**. In this position, arms **32** are operable to slidingly move along back loop portion **28** towards the suspension point **30**, in the direction of arrow A, as shown in FIG. **2**.

In order to position the swing chair **12** in an upright position, arms **32** are moved from the first position to the second position locating the back end **36** adjacent the suspension point **30**. FIG. **3** shows the swing chair **12** in an upright position with the back end **36** of arms **32** abutting the suspension point **30**. The swing chair **12** is operable to be positioned in either the reclined or the upright position as required by a user.

The preferred embodiment can be modified in many ways. For instance, the preferred form of the body **14** may be made from a continuous flexible material such as a fabric that can be attached to the rope supports **24** along a seam. The body **14** may also be made from longitudinally extending rungs that form a continuous body. Similarly the rope supports **24** can be made from a continuous integral length of rope or a series of rope portions connected together. The rope supports **24** can have different ends, such as one chain link or an integral eye, that meet at suspension point **30** and are operable to connect to connection means **48**. Any material that is strong enough to suspend the swing chair **12** and any load placed in it and that can form a rope-like structure capable of being attached to the body **14** may be used. Similarly, frame **11** can be made from any material suitable to suspend the swing chair **12**, such as a composite plastic material or a suitable metal.

The swing chair **12** can be suspended from any structure that is strong enough to support it and that allows the full range of swing motion, such as a large tree branch, or an internal ceiling beam in a building. The connection means **48** may be any means of connection that allows the swing chair **12** to be suspended, such as a hole through which the rope supports **24** can be passed and then attached to the top side of the supporting member **44**.

Other such variations as will be appreciated by those skilled in the art may be made within the scope of the appended claims.

What is claimed is:

1. A reclinable swing chair having:

a body having a seat portion and a back rest portion defining a forward edge and a rear edge, respectively;

a pair of rope supports, each rope support being disposed on opposite sides of the body and coupled to said forward edge and rear edge of the body, the rope supports defining front and back loop portions adapted to converge at a suspension point to suspend the swing chair; and

a pair of adjustable arms, each arm having a front end coupled to the front loop portion and a back end slidingly receiving the back loop portion for movement between a first position adjacent said rear edge of the body and a second position spaced from said rear edge of the body so that the swing chair may be moved between a reclined position and an upright position.

2. A reclinable swing chair according to claim **1**, wherein each rope support is a continuous integral length of rope having a few chain links attached at each end for coupling to a hook.

3. A reclinable swing chair having:

a body having a seat portion and a back rest portion defining a forward edge and a rear edge, respectively, the seat portion and the back rest portion comprising a plurality of longitudinally extending rungs disposed in parallel relation to the forward edge and the rear edge, the rungs having openings located at opposite ends thereof;

a pair of rope supports each disposed on opposite sides of the body and received through the openings in the rungs, the supports defining front and back loop portions adapted to converge at a suspension point to suspend the swing chair;

a pair of braces, each brace having a front end coupled to the front loop portion proximate to the forward edge of

the seat portion and a back end coupled to the front loop portion between the seat portion and the back rest portion; and

a pair of adjustable arms, each arm having a front end coupled to the front loop portion between the suspension point and the associated brace, and a back end slidingly receiving the back loop portion for movement between a first position adjacent said rear edge of the body and a second position spaced from said rear edge of the body so that the swing chair may be moved between a reclined position and an upright position.

4. A reclinable swing chair according to claim **3**, wherein each rope support is a continuous integral length of rope having a few chain links attached at each end for coupling to a hook.

5. A reclinable swing chair assembly comprising a frame and a reclinable swing chair, having:

the frame having an elongated horizontally extending supporting member, a leg assembly attached to said supporting member and extending downwardly therefrom to maintain the frame in an upright position, the supporting member being spaced in use from a supporting surface and adapted to suspend the swing chair;

the swing chair having body having a seat portion and a back rest portion defining a forward edge and a rear edge, respectively, the seat portion and the back rest portion comprising a plurality of longitudinally extending rungs disposed in parallel relation to the forward edge and the rear edge, the rungs having openings located at opposite ends thereof;

a pair of rope supports each disposed on opposite sides of the body and received through the openings in the

rungs, the supports defining front and back loop portions adapted to converge and attached to the supporting member to suspend the swing chair;

a pair of braces, each brace having a front end coupled to the front loop portion proximate to the forward edge of the seat portion and a back end coupled to the front loop portion between the seat portion and the back rest portion; and

a pair of adjustable arms, each arm having a front end coupled to the front loop portion in spaced relation to the braces and a back end slidingly receiving the back loop portion for movement between a first position adjacent said rear edge of the body and a second position spaced from said rear edge of the body so that the swing chair may be moved between a reclined position and an upright position.

6. The reclinable swing chair assembly of claim **5**, wherein the supporting member further has a connection means attached to said supporting member and operable to suspend the body therefrom.

7. The reclinable swing chair assembly of claim **6**, wherein the connection means comprises a pair of hooks and the rope supports have ends for coupling to the hooks.

8. A reclinable swing chair assembly according to claim **5**, wherein the leg assembly includes a pair of transversely extending feet to stabilise the frame.

9. A reclinable swing chair assembly according to claim **8**, wherein the feet are releasably attached to the leg assembly and may be removed for storage.

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